

AMENDMENT(S) TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in this application. Please amend claims 7-20 and 22 as follows:

Listing of Claims:

1. (Previously presented) A method for attenuating the motion of a hydraulic cylinder (10, 11) of mobile work machinery comprising the steps of:
 - a) registering the speed of the hydraulic cylinder (10, 11) prior to its reaching a respective limit of travel and determining whether the speed exceeds a predetermined value;
 - b) reducing the speed of the hydraulic cylinder (10, 11) if the speed exceeds the predetermined value prior to reaching one of the limits of travel of the hydraulic cylinder (10, 11), and
 - c) moving the hydraulic cylinder (10, 11) to the respective limit of travel at reduced speed, wherein said step (c) of reducing the speed is accomplished by the steps of
 - (i) throttling the inflow to, and/or the outflow from, the hydraulic cylinder (10, 11) by a flow control device (4, 5, 6), and
 - ii) changing the point in time (P7, P7') when throttling commences depending on the registered speed.
2. (Previously presented) The method according to claim 1, wherein the throttling speed of the flow control device (4, 5, 6) is preset irrespective of the registered motion speed of the hydraulic cylinder (10, 11).

3. (Previously presented) The method according to claim 1, wherein commencement of attenuation (P7, P7') is delayed with reduced registered motion speed.

4. (Previously presented) The method according to claim 1, wherein a fixed initial point in time (P7) is always preset if the registered motion speed is greater than, or equal to, a preset limit speed, and, if the motion speed registered is below the limit speed, the point in time (P7') is delayed in relation to the fixed point in time (P7) by a period of time (t_F).

5. (Previously presented) The method according to claim 4, wherein the period of time (t_F) is changed depending on the registered motion speed.

6. (Previously presented) The method according to claim 1, wherein prior to reaching the respective limits of travel, two limit signal transmitters (S_1 , S_2) which are arranged in tandem, are overtravelled; the period of time (t_K) between overtravel of the two limit signal transmitters (S_1 , S_2) is registered, from the registered period of time (t_K) and a preset period of time (t_s) a time difference (Δt) is determined; and according to the time difference (Δt), a delay (t_F) of the point in time (P7') when attenuation commences is determined.

7. (Currently amended) [[A]] The method according to claim 1 further providing an attenuating device for attenuating the motion of a hydraulic cylinder of mobile work machinery, said attenuating device according to claim 1 and comprising

a position registering device (17) for registering a preliminary limit position of the hydraulic cylinder (10, 11),

a control device (4, 5, 6) for throttling at least one of inflow to and outflow from the hydraulic cylinder (10, 11),

a control device (15) for controlling the flow control device (4, 5, 6) when the preliminary limit position is reached,

a speed registering device (16) for registering the motion speed of the hydraulic cylinder when the preliminary limit position is reached, and

the control device (15) comprises a delay device for delaying driving the flow control device (4, 5, 6), depending on the registered motion speed.

8. (Currently amended) The ~~device~~ method according to claim 7 providing the attenuating device, wherein the speed registering device (16) comprises two limit signal transmitters (S_1 , S_2) arranged in tandem, and a time registering device (19) is provided which registers the period of time (t_k) between the signals of the two limit signal transmitters (S_1 , S_2).

9. (Currently amended) The ~~device~~ method according to claim 8 providing the attenuating device, wherein one of the limit signal transmitters (S_1 , S_2) at the same time forms the position registering device (17).

10. (Currently amended) The ~~device~~ method according to claim 7 providing the attenuating device, wherein first and second markings (21, 22) are provided at at least one of the piston rod (18) of the hydraulic cylinder (10, 11) and a detection transmitter (20) coupled therewith, with said first and second markings (21, 22) corresponding to the two preliminary limit positions, and both markings being able to be registered by at least one of the position registering device (17) and speed registering device (16).

11. (Currently amended) The ~~device~~ method according to claim 7 providing the attenuating device, wherein the speed registering device (16) is integrated in the hydraulic cylinder (10, 11).

12. (Currently amended) The ~~device~~ method according to claim 7 providing the attenuating device, wherein the speed registering device (16) is arranged to be separate from the hydraulic cylinder (10, 11) and is associated with a detection transmitter (20).

13. (Currently amended) The ~~device~~ method according to claim 7 providing the attenuating device, wherein the control device (15) comprises a comparator device (23) for comparing the registered period of time (t_k) with a preset period of time (t_s) and forming the difference between the two periods of time (t_k, t_s), and the delay device comprises a delay transmitter which presets the delay (t_F) at which the flow control device (4, 5, 6) is driven, with such presetting depending on the determined difference.

14. (Currently amended) The ~~device~~ method according to claim 7 providing the attenuating device, wherein the position registering device (17) is associated with a hinge point of two components of the motion train which is driven by the hydraulic cylinder (10, 11), with said position registering device (17) registering the position of the two components in relation to each other.

15. (Currently amended) The ~~device~~ method according to claim 8 providing the attenuating device, wherein first and second markings (21, 22) are provided at least one of the piston rod (18) of the hydraulic cylinder (10, 11) and a detection transmitter (20) coupled therewith, with said first and second markings (21, 22) corresponding to the two preliminary limit positions, and both markings being able to be registered by at least one of the position registering device (17) and speed registering device (16).

16. (Currently amended) The ~~device~~ method according to claim 9 providing the attenuating device, wherein first and second markings (21, 22) are provided at least one of the piston rod (18) of the hydraulic cylinder (10, 11) and a detection transmitter (20) coupled therewith, with said first and second markings (21, 22) corresponding to the two preliminary limit positions, and both markings being able to be registered by at least one of the position registering device (17) and speed registering device (16).

17. (Currently amended) The ~~device~~ method according to claim 8 providing the attenuating device, wherein the control device (15) comprises a comparator device (23) for comparing the registered period of time (t_K) with a preset period of time (t_s) and forming the difference between the two periods of time (t_K , t_s), and the delay device comprises a delay transmitter which presets the delay (t_F) at which the flow control device (4, 5, 6) is driven, with such presetting depending on the determined difference.

18. (Currently amended) The ~~device~~ method according to claim 9 providing the attenuating device, wherein the control device (15) comprises a comparator device (23) for comparing the registered period of time (t_K) with a preset period of time (t_s) and forming the difference between the two periods of time (t_K , t_s), and the delay device comprises a delay transmitter which presets the delay (t_F) at which the flow control device (4, 5, 6) is driven, with such presetting depending on the determined difference.

19. (Currently amended) The ~~device~~ method according to claim 10 providing the attenuating device, wherein the control device (15) comprises a comparator device (23) for comparing the registered period of time (t_K) with a preset period of time (t_s) and forming the difference between the two periods of time (t_K , t_s), and the delay device comprises a delay transmitter which presets the delay (t_F) at which the flow control device (4, 5, 6) is driven, with such presetting depending on the determined difference.

20. (Currently amended) The ~~device~~ method according to claim 15 providing the attenuating device, wherein the control device (15) comprises a comparator device (23) for comparing the registered period of time (t_k) with a preset period of time (t_s) and forming the difference between the two periods of time (t_k , t_s), and the delay device comprises a delay transmitter which presets the delay (t_F) at which the flow control device (4, 5, 6) is driven, with such presetting depending on the determined difference.

21. (Previously presented) The method according to claim 5, wherein the period of time (t_F) is selected proportionally in relation to the registered motion speed.

22. (Currently amended) The ~~device~~ method according to claim 13 providing the attenuating device, wherein said presetting is proportional to said determined difference.